[0012] Also, in a preferred embodiment of the invention, the dispenser may include an extension or standoff section which allows the receptacle holding the treatment chemical to be positioned below the lower end of the tubing when the plunger assembly comes to rest at the bottom of the well. This allows the treatment chemical to be dissolved into [*or mixes with*] or mixes with the liquid located in the near wellbore area, thereby increasing the efficiency of the chemical delivery.

Please replace paragraph [0025] with the following amended paragraph:

[0025] The chemical dispenser 65 should securely attach to plunger 20. In some applications it may be desirable for the chemical dispenser 65 to have some play in the connection between the plunger 20 and the chemical dispenser 65 to permit a slight wobble. Some operators may prefer a more rigid fit, in which case, a portion of the upper surface 90 of head 66 can be a shaped surface which mates with a corresponding surface 92 on the plunger 20 so as to limit the movement of the plunger with respect to the dispenser. In a preferred embodiment, one or more upper ports 94 are provided, and one or more lower ports 96 are provided. Upper ports 94 allow gas and liquid to enter or leave the receptacle 70. While the plunger is falling in the tubing the primary function of ports 94 is to exhaust any gas and liquid which may enter the receptacle to aid the fall of the plunger. Once the plunger has reached the stop at the bottom of the tubing the upper ports 94, if below the liquid level, will function to allow chemical contained in the receptacle to diffuse into [*or mix with*] or mix with the liquid. Lower ports 96 allow liquid to enter and leave the receptacle 76. In the illustrated embodiment, the lower ports 96 are on the bottom surface of the body 74; however, they can also be positioned on the side walls. Preferably, a valve 98 is provided. In the illustrated embodiment, valve 98 is a flexible rubber sheet 100 having a dimension sufficient to cover lower ports 96. Valve 98 is held in place by a retaining plug 102 which can extend through an opening 104 in the bottom of the member 68. The purpose of valve 98 is to either restrict or close off the flow of liquid through lower ports 96 as the plunger drops. As the plunger drops in the tubing, the flexible sheet 100 will be pushed against the bottom of the member 68. This will either completely seal or partially seal off ports 96. The purpose of valve 98 is to minimize or

prevent the flow of fluid through receptacle 70 while the system drops in the tubing. This will prevent or minimize the washing of chemicals out of the receptacle as the chemical dispenser 65 passes through the fluid above the stop of the tubing. Once the delivery system 64 comes to rest on the stop, flexible sheet 100 will fall away from the bottom of member 68 and to a second position 102 (shown in phantom), because there is no force pushing the flexible sheet 100 against the bottom of member 68. This will allow liquid to enter receptacle 70 and leach the treatment chemical 72 out of receptacle 70.

Please replace paragraph [0029] with the following amended paragraph:

[0029] Figure 6 is a partial view of a chemical dispenser 116. In this embodiment, a cap 126 having a threaded surface 128 for engaging threaded surface 130 of the wall defining the receptacle 70 is provided. The cap 126 contains lower ports 96. The wall defining the receptacle defines upper ports 96. In this embodiment, between head 118 and receptacle section 116 is standoff section 120. Standoff section 120 has the length L_1 and receptacle section 70 has a length L_2. For purposes of illustration, only one side of tubing 14 is shown together with stop 18. In this illustration stop 18 includes a shock absorbing spring 122 which absorbs the impact of the delivery system. Head 118 is provided with a surface 124 which contacts the spring of the stop 18. Standoff section 120 has a sufficient length to allow the receptacle 70 to be positioned below the lower end tubing 14. This is advantageous because it allows the chemicals in the receptacle to diffuse in the wellbore below the tubing, rather than diffusing inside the tubing. Generally, the treatment of the formation will be more effective when the chemical diffuses directly into the space below the tubing. Preferably, the chemical dispenser 116 is dimension such that at least a portion of it will pass through the stop. An advantage of the present invention is that the assembly can be constructed to place the dispenser at a predetermined location in relation to the stop. Pressure drop occurs across the stop during operation, and this pressure drop can produce temperature and pressure changes which cause scale deposits to form in the stop. If scale deposits are allowed to buildup it the stop, the deposits can become great enough to cause the plunger to become stuck in the stop. If this occurs, it may be necessary to use wireline removal techniques, or a rig to pull the tubing. With the present invention

treatment chemicals are delivered and concentrated in the vicinity of stop, and thus scale formation can be very effectively treated. Indeed, the dispenser can be configured to come to rest within the stop for treatment of scale, and later reconfigured to add in the stand off section to provide treatment below the stop.

Please replace paragraph [0033] with the following amended paragraph:

[0033] Figures 10 and 11 illustrate yet other embodiments of the present invention. These embodiments use known plungers as carriers for the chemicals. Figure 10 illustrates a coiled tube plunger 44. In this embodiment of the invention, the space between coiled member 180 of plunger 44 is partially or completely filled with chemical 182. Chemical 182 may be in the form of a paste or treatment chemical formed into an appropriate consistency for packing into the space between the coils. In Figure 11, a wire brush plunger 48 is shown. In this embodiment of the invention, the brush portion 50 of the plunger 48 is impregnated with treatment chemical 84. The treatment chemical can be applied in the form of a spray, paste, or gel. Preferably, it has the consistency which will be retained on the brush as it falls through the tubing. The embodiments of Figures 10 and 11 have the advantage of utilizing existing plungers as the delivery system. They have the disadvantage, however, that when the plunger comes to rest on the stop the treatment chemical will be positioned in the tubing. Thus, the chemical must be dissolved within the tubing and then migrate to the formation to provide treatment. [*This embodiment has an advantage in the treatment and prevention of paraffin deposits. Paraffin problems usual occur above the stop. Generally, paraffin problems occur above the 2000 feet level, and most commonly occur from about 1500 to 1600 feet from the surface. In the past, plungers aided in the removal of paraffin deposits because as the plunger passed the deposit it would tend to scrap off some of the paraffin. This embodiment allows for the delivery of chemical along the tubing to prevent or minimize paraffin deposit and build up.*] <u>This embodiment has an advantage in the treatment and prevention of paraffin deposits. Paraffin problems usually occur above the stop. Generally, paraffin problems occur above the 2000 feet level, and most commonly occur from about 1500 to 1600 feet from the surface. In the past, plungers aided in the removal of paraffin deposits because as the</u>

plunger passed the deposit it would tend to scrap off some of the paraffin. This embodiment allows for the delivery of chemical along the tubing to prevent or minimize paraffin deposit and build up.

Please replace paragraph [0034] with the following amended paragraph:

[0034] Figure 12 illustrates plunger/dispenser 190. Previous embodiments discussed related to a chemical dispenser to be attached to a known plunger and a modification of the known plunger by the application of treatment chemical to be useful in the present invention. Figure 12 relates to an embodiment of the present invention in which the device is specifically configured to be both a plunger and a chemical delivery system. The assembly has an upper portion 192 which includes an interface section 194. Interface portion is that portion which is adjacent to the inside wall of the tubing. The interface section may be coiled tubing, a brush, pads, wobble rings or other known interface sections. The interface section fits inside the tubing snugly. When the pressure is released from the well and the plunger travels to the surface, the interface section serves to retain much of the fluid above the top of the plunger above the plunger so that it may be pushed out at the well head. Below the interface section is the lower section 196. The lower section 196 can include any type of receptacle to receive chemicals, such as an absorbent pad or matrix, or other suitable structure as described above. In the illustrated embodiment, the receptacle is a stiff wire mesh 198, and chemical has been deposited in the interstices between the mesh. A lower port 195 can be provided at the bottom, and a series of ports 197 can be provided along the length of lower section 196. Thus lower section 196 defines a receptacle having one or more upper ports and one or more lower ports. This embodiment also has a standoff section 200 for elongating the system such that all or a portion of the receptacle will be below the end of the stop on the tubing. The lower end of the upper section 194 is of reduced diameter to provide surface 202 for contacting the stops. A neck 204 is provided on the top. Figure 13 is a cross section of Figure 12 along line 13-13. The cross section is of a multipoint star design. This design increases the surface area of the dispenser exposed to the well liquid and provides flow paths for the liquid. In the preferred embodiment the chemical receptacle portion 198 of

the apparatus 190 is of small enough dimensions to pass through the stop at the bottom of the tubing.

Amendments to the Claims:

1-2. (canceled)

3. (currently amended) A plunger apparatus for treating the downhole sections of a wellbore with said plunger during plunger lift production procedures in a well characterized by a treatment chemical deposited on the outside of said plunger.

4. (canceled)

5. (canceled)

6. (canceled)

7. (canceled)

8. (canceled)

9. (currently amended) A delivery apparatus ~~of claim 8~~ for delivery of chemicals down a wellbore comprising:

an elongate member;

an interface section on the upper portion of said elongate member; and

a chemical dispensing section in the lower portion of said elongate member,

wherein said chemical dispensing section is dimension so to be able to pass through a stop at the bottom of a tubing string.

10. (currently amended) A delivery apparatus of claim ~~8~~ 9 wherein said chemical dispensing section defines one or more receptacles for receiving treatment chemical.

11. (currently amended) An apparatus for the charging of treatment chemical to a chemical delivery system comprising:

a conduit in a wellhead manifold which receives a chemical system said conduit having an opening along its length;

a plunger catcher connected to said conduit;

an applicator connected to said opening said applicator having an open end positioned to apply treatment chemical to the outer surface of a plunger; and

a delivery conduit connected to said applicator~~;~~.

12. (original) An apparatus of claim 11 further comprising a chemical storage source connected to said delivery conduit.

13. (original) An apparatus of claim 11 further comprising a valve connected to said delivery conduit.

14. (canceled)

15. (canceled)

16. (currently amended) A chemical dispenser ~~of claim 6~~ for use with a plunger in a wellbore comprising:

a head member; and

a body defining at least one receptacle for a treatment chemical said body also defining one or more upper ports and one or more lower ports; wherein said at least one receptacle is a wire mesh defining interstices.

17. (currently amended) A chemical dispenser ~~of claim 5~~ for use with a plunger in a wellbore comprising:

a body defining at least one receptacle for a treatment chemical;

an attachment mechanism connected to said body; and

wherein said at least one receptacle is a wire mesh defining interstices.

18. (canceled)

19. (currently amended) A chemical delivery system ~~of claim 18~~ for delivering chemicals down a wellbore comprising:

a plunger; and

a chemical dispenser attached to said plunger said chemical dispenser having one or more receptacles for receiving treatment chemicals, wherein said chemical dispenser includes a stand off section, said stand off section and the portion of said dispenser having said one or more receptacles for receiving treatment chemicals are dimensioned such that they can pass through a stop at the bottom of a tubing string.

20. (new) A chemical dispenser for use with a plunger in a wellbore comprising:

a body defining a receptacle for receiving a treatment chemical; and

said body portion defining said receptacle being dimensioned such that it can pass through a stop at the bottom of a tubing string.

21. (new) A chemical dispenser of claim 20 wherein said body also defines one or more upper ports and one or more lower ports for flow into and out of said receptacle.

22. (new) A chemical dispenser of claim 21 further comprising a valve to control liquid flow into said one or more lower ports.

23. (new) A chemical dispenser of claim 22 wherein said valve is a flexible sheet.

24. (new) A plunger apparatus of claim 3 wherein said plunger is selected from the group consisting of a coiled tube plunger, a brush plunger, and a bar plunger having one or more exterior grooves.

25. (new) A delivery apparatus for delivery of chemicals down a wellbore comprising:

a plunger having an outer diameter and defining portions having a smaller diameter which are open to the exterior thereby defining a space open to the exterior of said plunger; and

a treatment chemical applied to said space and at least partially filling said space.

26. (new) A plunger apparatus of claim 25 wherein said plunger is selected from the group consisting of a coiled tube plunger, a brush plunger, and a bar plunger having one or more exterior grooves.

27. (new) A chemical delivery apparatus comprising:

an elongate member;

an interface section on the upper portion of said elongate member;

a chemical dispensing section in the lower portion of said elongate member;

a standoff section between said interface section and said chemical dispensing section;

wherein said chemical dispensing section is dimensioned so as to be able to pass through a stop at the bottom of a tubing string; and

wherein at least a portion of said standoff section is dimensioned so as to be able to pass through a stop at the bottom of a tubing string.

28. (new) A chemical delivery apparatus of claim 27 wherein the length of said standoff section is sufficient such that all or a portion of said chemical dispensing section extends below the bottom of the stop on the end of the tubing.

29. (new) A chemical delivery apparatus of claim 27 wherein the length of said standoff section is sufficient such that all or a portion of said chemical dispensing section extends below the bottom of the tubing.

30. (new) A chemical dispenser of claim 20 wherein said at least one receptacle is a wire mesh defining interstices.